

before delivery to the fluid vessel.

8. Apparatus for treating wastewater according to Claim 1 and further comprising control means for maintaining the temperatures of the heat transfer liquid and the heating element within a predetermined range of values as the collected wastewater is being heated by activating the heating element substantially only when the temperature of the heating element exceeds the temperature of the heat transfer liquid by less than a preset value.

9. The apparatus according to Claim 8, wherein the control means comprises at least a first temperature sensor measuring the temperature of the heat transfer liquid and at least a second temperature sensor measuring the temperature of the heating element, and means responsive to the temperatures sensed by the temperature sensors for activating the heating of the heating element substantially only when the difference in the temperatures of the heat transfer liquid and the heating element is less than the preset value and deactivating the heating when the temperature difference is greater than the preset value.

10. The apparatus according to Claim 9, wherein the first temperature sensor is suspended in the heat transfer liquid and spaced from the heating element and the walls defining the heating chamber, and the second temperature sensor is in contact with the heating element

**Claims 2 and 5-7 are continued but are not amended.**

#### **REMARKS**

Applicant acknowledges the Official Action dated September 24, 2002, and respectfully requests reconsideration of the application as amended and in view of the following remarks.

Applicant understands that the Examiner has not checked the specification in sufficient detail to determine all possible grammatical and typographical errors, except for noting the spelling of "movable" which Applicant has corrected. Applicant is unaware of other such errors.

Applicant is firmly of the belief that all of the claims as originally filed are directed to patentable subject matter, notwithstanding the references to U.S. Patents No. 5,582,680 to VanKouwenberg ("VanKouwenberg '680"); No. 5,348,623 to Salmon ("Salmon") and No. 4,141,708 to Grosse ("Grosse"). In this respect, Applicant confirms that the invention of the present application is directed to substantially the same purpose as that of VanKouwenberg '680, reference to which is included in the specification. While Applicant also acknowledges that Salmon discloses in Figs. 1-5 the use of a liquid in heat transfer devices 110 and 140 to produce hot water by heating element 116 and gas burner 146 outside the heat transfer devices, Applicant would respectfully call to the Examiner's attention that Salmon appears clearly to teach away from Applicant's invention. Whereas Salmon uses the liquid to heat water in Figs. 1-5, Salmon does not use such a liquid to distill the water in Figs. 6-12, but rather creates the steam by inserting a heating element into the water being distilled. As such, and without knowledge of the present invention, Applicant contends that Salmon cannot be combined with VanKouwenberg '680 to teach the present invention as claimed in Claim 1, in which, *inter alia*, the heating element is immersed in the heat transfer liquid to vaporize the wastewater and the heating chamber generally surrounds the fluid vessel. Nor can it be said that the references, whether considered singly or in combination, disclose or contemplate any of the claims dependent on Claim 1, as for example the wastewater supply tank of Claim 4 or the heat control means of Claims 8-10.

The remaining prior art of record has been noted, but Applicant does not believe that these

references either anticipate or make obvious the invention as claimed, whether taken singly or in combination.

Applicant notes with appreciation that the Examiner is available to receive inquiries. However, in view of the foregoing amendment and remarks, it is believed that the application is now in condition for a notice of allowability, and such action is respectfully requested. If it will assist in moving the application to allowability, the Examiner is invited to call the undersigned attorney to clarify any issues remaining.

Respectfully submitted,

Dated: January 21, 2003

By: Ronald S. Kareken

Ronald S. Kareken  
Reg. No. 20,573

Jaekle Fleischmann & Mugel, LLP  
39 State Street  
Rochester, New York 14614-1310  
Tel: 585-262-3640  
Fax: 585-262-4133



**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

1. A compact, self-contained and moveable apparatus for treating wastewater containing a substantial volume of water and substantially lesser amounts of, at water boiling point<sup>s</sup>, non-volatile contaminants, the apparatus comprising:

(a) a fluid vessel to collect wastewater and having at least a partially open top wall, side walls and a bottom wall,

(b) means for delivering wastewater to the fluid vessel,

(c) a heating vessel surrounding and spaced from at least the side walls and the bottom wall to form an interior heating chamber between the heating vessel and the fluid vessel,

(d) a heating element positioned in the heating chamber to generate heat sufficient to vaporize the wastewater and form water vapor,

(e) a heat transfer liquid having a boiling point substantially in excess of the boiling point of the collected wastewater and filling at least a substantial portion of the heating chamber and immersing the heating element to transfer [the] heat generated by the heating element to the fluid vessel walls to heat the collected wastewater until it is vaporized,

(f) an outer jacket substantially surrounding the heating vessel and spaced from the heating vessel to define an insulating space between the jacket and heating vessel, and

(g) vapor exhaust means for expelling the water vapor from the fluid vessel.

3. Apparatus for treating wastewater according to Claim 1 and further comprising means for causing ambient air to flow through the insulating space to facilitate vapor exhaust and to cool the outer jacket.

4. Apparatus for treating wastewater according to Claim 1 and further comprising a [moveable] movable wastewater supply tank positioned under the outer jacket for supplying wastewater to the delivering means, the tank including means for filtering larger particles from the wastewater before delivery to the fluid vessel.

8. Apparatus for treating wastewater according to Claim 1 and further comprising control means for maintaining the temperatures of the heat transfer liquid and the heating element

within a predetermined range of values as the collected wastewater is being heated by activating the heating element substantially only when the temperature of the heating element exceeds the temperature of the heat transfer liquid by less than a preset value.

9. The apparatus according to Claim 8, wherein the control means comprises at least a first temperature sensor measuring the temperature of the heat transfer liquid and at least a second temperature sensor measuring the temperature of the heating element, and means responsive to the temperatures sensed by the temperature sensors for [controlling] activating the heating of the heating element substantially only when the difference in the temperatures of the heat transfer liquid and the heating element is less than [a] the preset value and deactivating the heating when the temperature difference is greater than the preset value.

10. The apparatus according to Claim 9, wherein the first temperature sensor is suspended in the heat transfer liquid and spaced from the heating element and the walls defining the heating chamber, and the second temperature sensor is in contact with the heating element